

REMARKS

This Amendment is submitted in response to the Office Action mailed on January 23, 2004. In the Office Action, Claims 1-19, 21, 22, and 25 stand rejected under 35 U.S.C. §103. The Office Action is contradictory with respect to Claim 23. It is stated on page 4, in paragraph 2, with respect to Claim 23, that it would be obvious to use the claim composition as a powder. However, nowhere is Claim 23 indicated as being rejected based on prior art. Indeed, the Office Action states that Claim 23 contains allowable subject matter. Applicants respectfully request clarification with respect to the status of Claim 23. However, because Applicants believe that Claim 23 is allowable, Applicants have not discussed Claim 23 in this response and respectfully request that it and Claim 24, that depends therefrom, be passed to allowance.

Each of the other remaining independent claims has been amended to include the limitation that the partially hydrolyzed egg white protein has a molecular weight in the range of 2,000 to about 6,000. Applicants respectfully submit that the claims are allowable over the cited references for the following reasons.

The claims have been rejected under 35 U.S.C. §103 as being unpatentable over *Barani* or *Kaishi*, or *Medical Research*. Applicants respectfully submit that this rejection is not proper for the following reasons. Applicants' claimed invention provides an iron protein hydrolysate complex. This hydrolysate is defined by a particular molecular weight. This molecular weight range has been surprisingly found to increase capacity of the complexed iron. Indeed, for example, as set forth in Claim 6, up to 10% by weight of the iron can be complexed in this way. This is nearly as much as in the assimilated ovotransferrin that is disclosed by the prior art. However, the prior art does not suffer the disadvantages in that the egg white may be used as such and not only ovotransferrin. Egg white is an ingredient which is much easier to obtain and much cheaper than ovotransferrin which must be isolated from the egg white.

With respect to *Barani*, there is no disclosure or suggestion as to the degree of hydrolysis. Accordingly, one skilled in the art would have no idea what degree of hydrolysis must be performed nor as to the particular molecular weight of the product to be used. Thus, Applicants respectfully submit *Barani* uses a prior art method requiring the ovotransferrin. In fact, the protein used for complexing according to *Barani* requires an acylation step which is not required by Applicants' claimed invention.

Applicants have surprisingly found that by hydrolysis of egg white protein to a specific molecular weight range of 2,000 to 6,000, this results in a highly complex capacity of iron which, although nearly as high as that reported in *Barani*, does not require the isolation procedure to obtain ovotransferrin. Nor does it require the subsequent acylation step. The present invention provides surprising and unexpected results over *Barani*. Therefore, Applicants respectfully submit the claimed invention is not obvious in view of *Barani*.

The remaining prior art, Applicants respectfully submit, is even less relevant than *Barani*.

Medical Research teaches a method of preparing complexes of free amino acids and iron. These free amino acids may be obtained by hydrolysis and protein. Although also egg protein may be used as the starting material to obtain free amino acids, there is no disclosure of hydrolyzed egg protein but rather gelatin encasing. It is clear from *Medical Research* that free amino acids are preferred over hydrolysates having relatively high molecular weight as claimed by the present invention. For example, it is stated on page 2, left hand column, lines 23-25, that "the procedure [is] varied to give a high amino acid yield; and as far as possible, to exhaust the proteins present."

In contrast, the present invention avoids complete hydrolysis but requires a particular molecular weight size hydrolysate of egg white protein. Because *Medical Research* relates to use of free amino acids and not egg white protein, the claimed invention is neither anticipated nor obvious from *Medical Research*.

Likewise, the *Kaishi* reference does not relate to comparable hydrolysates. *Kaishi* fails to disclose or suggest the problem of providing iron protein complexes for providing iron as a trace element in human and animal nutrition. In contrast, *Kaishi* uses a mixture of iron and egg white albumin to assess antioxidative activity of peptides.

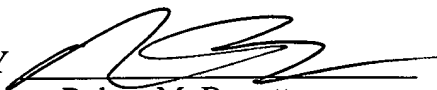
The largest peptides of *Kaishi* encompass seven amino acids and its molecular weight would be calculated to be approximately 775 based on no molecular weight of its constituent amino acids. Accordingly, the present invention provides a hydrolysate complex having a different molecular weight, a different purpose, and different advantages than the product of *Kaishi*. Therefore, the claimed invention is neither anticipated nor obvious in view of *Kaishi*.

Accordingly, Applicants respectfully submit that the obviousness rejections of the pending claims are improper as a matter of law and fact and therefore respectfully request that they be withdrawn.

Accordingly, Applicants respectfully request reconsideration of their patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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Date: April 21, 2004